on other characters. It is an interesting fact that the ancient *Prepinus* shows these "bars," which fact helps to establish their ancient character. The total result is to emphasize strongly the distinctness of the araucarians from all the other Coniferales.—J. M. C.

Embryo sacs of some Onagraceae.—An investigation[27] of *Epilobium angustifolium*, *E. Dodonaei*, *Oenothera biennis*, and *Circaea lutetiana* shows an interesting variation from the conventional development of the embryo sac. The usual tetrad of four megaspores is formed and the lowest one enlarges and begins to develop in the well-known way, but as soon as the four-nucleate stage is reached, two synergids and an egg are formed at the micropylar end of the sac, leaving one free nucleus in the middle or toward the antipodal end. This sac looks like that of *Cypripedium*, as described by Miss PACE,[28] but is formed from one megaspore, while that of *Cypripedium* is formed from two. At fertilization, one male nucleus fuses with the nucleus of the egg and the other with the single polar nucleus, so that there is no triple fusion as in *Cypripedium*, where one of the synergids takes part. The embryo and endosperm develop in the usual way.—CHARLES J. CHAMBERLAIN.

The original Oenothera Lamarckiana.—GATES[29] has discovered a manuscript in the Sturtevant collection of the library of the Missouri Botanical Garden "which proves that this plant was originally a species growing wild in Virginia, and that it was the first *Oenothera* introduced into European gardens, about 1614." In view of the fact that the origin of this important species has been in doubt, and that it has been claimed to have originated in cultivation, this discovery is noteworthy. The record referred to is in the form of a long marginal note in a copy of BAUHIN'S *Pinax*, by JOANNIS SNIPPENDALE, and is an accurate description of the plant. "The record is as complete and accurate as could be desired, to prove to one familiar with the characters of these forms the identity of the plants in question." The plant was described under BAUHIN'S name, *Lysimachia lutea corniculata*.—J. M. C.

Color inheritance in Lychnis.—SHULL[30] has discovered that the purple color in *L. dioica* is a compound character, produced by the interaction of three distinct and independent genes. The two types of purple color present in different individuals are a reddish purple, changed to blue by alkalies, and a bluish purple, changed to red by weak acids. The bluish or alkaline color is hypostatic to the reddish or acid color, which is the reverse of the condition found in all other

---

[27] MODILEWSKI, J., Zur Embryobildung von einigen Onagraceen. Ber. Deutsch. Bot. Gesell. **27**:287–292. *pl. 13*. 1909.

[28] BOT. GAZETTE **44**:353–374. *pls. 24–27*. 1907.

[29] GATES, R. R., The earliest description of *Oenothera Lamarckiana*. Science N.S. **31**:425, 426. 1910.

[30] SHULL, GEORGE H., Color inheritance in *Lychnis dioica* L. Amer. Nat. **44**:83–91. 1910.

plants containing similar series of colors. It is inferred that crosses between white-flowered plants should result not infrequently in progenies of all purple-flowered offspring, or of purple and white in the ratios 1:1, 3:5, or 1:3; but as yet these results have not been found.—J. M. C.

Jurassic flora of Normandy.—LIGNIER[31] has added a number of new species to the rich jurassic flora of Normandy, that are suggestive of relationships concerning which real knowledge is very much desired. The Filicales are represented by species of *Lomatopteris* and *Linopteris*, and the Equisetales by a species of *Equisetites*. The cycadean forms, however, are of chief interest and abundance, and it would be a great gain to know definitely what the numerous species of *Zamites* and *Otozamites* represent. The conifers are represented by species of *Brachyphyllum*, *Pachyphyllum*, and *Conites*.

The memoir is undated, but its reception in March 1910 suggests recent publication.—J. M. C.

Apospory and apogamy in Trichomanes.—GEORGEVITCH[32] has investigated *Trichomanes Kaulfussii*, whose apospory and gemma production was described by BOWER in 1894. The branching filamentous prothallium bears sterigmata (singly or in tufts), at the ends of each of which is balanced a gemma. The development of prothallia from these gemmae is described in detail, and antheridia were observed developing directly upon the gemmae, sometimes associated with a prothallium on the same gemma. This transition from sporophyte to gametophyte is accompanied by no reduction in the number of chromosomes. Counts were made in both generations and at different stages of mitosis, and always approximated 80.—J. M. C.

Parasitic fungi of Wisconsin.—In 1884 TRELEASE published a list of the parasitic fungi of Wisconsin, and supplementary lists were issued by DAVIS in 1893, 1897, and 1903. Now a fourth supplementary list has appeared.[33] It contains a list of 76 forms occurring on hosts not previously recorded; and 113 forms not reported heretofore from the state. The latter list includes 9 new species and varieties in the following genera: *Ascochyta*, *Cercospora*, *Cylindrosporium* (2), *Gloeosporium*, *Phyllosticta* (2), *Ramularia*, and *Septoria*. This record in reference to 189 forms indicates what interest and persistence can do for any area.—J. M. C.

---

[31] LIGNIER, OCTAVE, Végétaux fossiles de Normandie. VI. Flore jurassique de Mamers (Sarthe). Mém. Soc. Linn. Normandie **24**: pp. 48. *pls. 2. figs. 7.* (Undated.)

[32] GEORGEVITCH, PETER, Preliminary note on apospory and apogamy in *Trichomanes Kaulfussii* Hk. et Grew. Annals of Botany **24**:233, 234. *figs. 7.* 1910.

[33] DAVIS. J. J., Fourth supplementary list of parasitic fungi of Wisconsin. Trans. Wis. Acad. Sci. **16**:739–772. 1909.